

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (previously presented) A pointing device comprising:
a housing for supporting a user's hand;
a pointing sensor, mounted in said housing, for providing a pointing signal;
a contour on said housing for receiving a finger of said user, said contour having curvature in at least one directions;
a solid-state touch sensor in said contour for detecting movement of said finger along said contour;
wherein said contour comprises a trench shaped to match a curve traced by a fingertip of said finger during a bending of said finger about a knuckle of said finger.
3. (canceled)
4. (canceled)
5. (previously presented) A pointing device comprising:
a housing for supporting a user's hand;
a pointing sensor, mounted in said housing, for providing a pointing signal;
a contour on said housing for receiving a finger of said user, said contour having curvature in at least one directions;
a solid-state touch sensor in said contour for detecting movement of said finger along said contour;
wherein said touch sensor includes at least two electrodes, and further comprising:
a circuit for detecting a contact with said electrode, including

a first, capacitive element;
a second element connected to said capacitive element;
a comparison circuit, having an input node connected to said capacitive and second elements, for comparing a voltage at said input node to a threshold voltage;
a clamp-high circuit, connected to said node, for clamping said node high in response to a clamp-high control signal;
a clamp-low circuit, connected to said input node, for clamping said node low in response to a clamp-low control signal; and
a controller, connected to an output of said comparison circuit, to said clamp-high circuit and to said clamp low circuit, for providing said clamp-high and clamp-low control signals and generating an output signal in response to measuring an amount of time between transitions of said output of said comparison circuit.

6. (original) The device of claim 5 wherein the second element is a current source.
7. (canceled)
8. (canceled)
9. (previously presented) A pointing device comprising:
a housing for supporting a user's hand;
a pointing sensor, mounted in said housing, for providing a pointing signal;
a contour on said housing for receiving a finger of said user, said contour having curvature in at least one directions;
a solid-state touch sensor in said contour for detecting movement of said finger along said contour;
a sensory feedback element for providing feedback to a user corresponding to an amount of movement of said finger in said contour;
wherein said sensory feedback element comprises a plurality of tactile formations on a surface of said contour.

10. (canceled)

11. (canceled)

12. (currently amended) A pointing device comprising:

a housing;

a pointing sensor, mounted in said housing, for providing a pointing signal;

a plurality of discrete electrodes mounted on said housing to detect movement of a finger, wherein at least first and second electrodes are electrically connected, said electrodes forming a solid state roller with a single column of electrodes, which is not part of a touchpad array;

~~a third electrode isolated from said first and second electrodes by a portion of said housing contacted by said finger, said third electrode being mounted where a finger will contact said third electrode in between contacting said first and second electrodes; and~~

a circuit, connected to said electrodes, for detecting contact of said finger with said electrodes.

13. (original) A pointing device comprising:

a housing;

a pointing sensor, mounted in said housing, for providing a pointing signal;

at least one electrode mounted on said housing;

a circuit for detecting a contact with said electrode, including

a first, capacitive element;

a second element connected to said first, capacitive element;

a comparison circuit, having an input node connected to said first and second elements, for comparing a voltage at said input node to a threshold voltage;

a clamp-high circuit, connected to said node, for clamping said node high in response to a clamp-high control signal;

a controller, connected to an output of said comparison circuit, to said clamp-high circuit and to said clamp low circuit, for providing said clamp-high and clamp-low control signals and generating an output signal in response to measuring an amount of time between transitions of said output of said comparison circuit.

14. (original) The device of claim 13 wherein the second element is a current source.

15. (currently amended) A mouse comprising:
a housing for supporting a user's hand;
first and second buttons mounted on said housing;
a pointing sensor, mounted in said housing, for providing a pointing signal;
a stationary scrolling sensor, mounted on said housing between said buttons, said scrolling sensor providing a scrolling command in response to a movement of a users finger across said stationary sensor, and continuing to provide said scrolling command in response to said finger reaching one end of said stationary scrolling sensor without lifting off, such that a display continues to scroll without additional movement of said finger.

16. (original) A method of capacitively detecting movement of a finger across a plurality of electrodes on a pointing device, comprising:

detecting, for each electrode, a first amount of time for a capacitance connected to said electrode to charge up from a low voltage to a first threshold;

detecting, for each electrode, a second amount of time for said capacitance to discharge from a high voltage to a second threshold; and

comparing said amounts of time to a calibration value corresponding to the absence of a finger on said electrodes.

17. (original) The method of claim 16 further comprising:
charging and discharging said capacitance faster than an AC frequency of an AC power supply;

detecting said first and second amounts of time at least twice during a period of said AC frequency to produce at least two measurement sets;
averaging said two measurement sets.

18. (currently amended) A pointing device comprising:
a housing for supporting a user's hand;
a pointing sensor, mounted in said housing, for providing a pointing signal;
a scrolling activator for providing a scrolling signal:
a speaker, mounted in said pointing device, for emanating sounds in response to said scrolling signal, said sounds simulating the sounds emanated by a mechanical roller, such that click sounds are generated when said scrolling signal causes a document scroll by at least one line.

19. (original) The pointing device of claim 18 wherein said device is a mouse.

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

- 27. (canceled)
- 28. (canceled)
- 29. (original) The pointing device of claim 5 wherein said second element is a resistive element.
- 30. (new) The pointing device of claim 12 wherein said plurality of electrodes includes no more than six electrodes, including said first and second electrodes.
- 31. (new) The pointing device of claim 12 wherein said plurality of electrodes includes only two electrodes, said first and second electrodes.